Claims

1. A method of embedding audio data of at least two audio data groups in an ancillary data space of a serial digital video data stream, comprising:

5   multiplexing the audio data groups to provide a serial multi-group audio data stream, and

       inserting the serial multi-group audio data stream into the ancillary data space of the serial digital video data stream.

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2. A method according to claim 1, wherein each audio data group consists of two audio data streams, and the method comprises multiplexing the audio data streams to provide said serial multi-group audio data stream.

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3. Apparatus for embedding at least two audio data groups in an ancillary data space of a serial digital video data stream, comprising:

       an embedder for formatting data of a first audio data
20 group, generating data packets from the formatted data and inserting the data packets into the digital video data stream, and

       an expansion device for formatting data of a second audio data group and supplying formatted data to the
25 embedder,

       and wherein the embedder generates data packets from the formatted data of the second audio data group and inserts the data packets into the digital video data stream.

30   4. A method of embedding ancillary data in an ancillary data space of a serial digital interface video stream, wherein each line of the video stream is composed of a horizontal ancillary data space followed by an active interval, said method comprising:

35   during the horizontal ancillary space of line n of the video stream, reading all data from a video FIFO, whereby at the start of the active interval of line n+1 of the video stream the video FIFO contains no data,

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during the active interval of line n, preparing an ancillary data packet and loading the data packet into the video FIFO,

5   during the horizontal ancillary data space of line n+1 of the video stream, reading all data from the video FIFO and inserting the ancillary data packet into the horizontal ancillary data space of line n+1, whereby at the start of the active interval of line n+2 of the video stream the video FIFO contains no data.

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5.   A method of processing multiple audio data streams, comprising:

writing the first and second audio data streams into respective FIFOs,

15   reading the audio data streams from the respective FIFOs,

combining the data streams read from the FIFOs,

periodically testing depth of data in each FIFO, and

forcing the depth of data in each FIFO to a selected

20   value.

6.   A method of embedding ancillary data in the horizontal ancillary data space of a serial digital video stream, wherein each line of the video stream is composed of

25   a horizontal ancillary data space followed by an active interval, said method comprising:

receiving the input serial digital video stream,

detecting whether ancillary data is embedded in the horizontal ancillary data space of the input serial digital

30   video stream,

if no ancillary data is embedded in the input serial digital video stream, embedding ancillary data in the serial digital video stream,

if ancillary data is embedded in the input serial

35   digital video stream, operating either in a cascade mode or in an originate mode,

and wherein operating in the originate mode includes the step of embedding ancillary data in the horizontal ancillary

data space of the serial digital video stream by overwriting data in the input serial digital video stream,

and operating in the cascade mode includes the step of embedding ancillary data in the serial digital video stream
5   without overwriting data in the input serial digital video stream.

7.   Apparatus for disembedding at least two audio data groups from an ancillary data space of a serial digital video
10   data stream, comprising:

a disembedder for reading data packets of at least two groups from the digital video data stream, formatting packet-wise data of a first audio data group as sample-wise data and outputting the sample-wise data of the first audio data
15   group, and

an expansion device for receiving packet-wise data of a second audio data group from the disembedder, formatting packet-wise data of the second audio data group as sample-wise data and outputting the sample-wise data of the second
20   audio data group.